

60,137-163
115-3189-U**REMARKS**

Claims 1, 2, 4, 5, 7-9, 21-24, 26-28 and 65-67 stand rejected under 35 U.S.C. §103(a) as being obvious over Moysan (U.S. Patent No. 5,413,874) in view of European Patent Application No. 0,486,711 and also over Welty (U.S. Patent No. 5,922,478) in view of EP '711.

Moysan and Welty both disclose an article including a nickel layer 13 deposited on a substrate 12 by electroplating. A layer of a non-precious refractory metal 22 is deposited by physical vapor deposition. Neither Moysan nor Welty disclose the step of subjecting the article to pulses of air to dry and clean the electroplated article. European Patent '711 suggests an apparatus for blowing a liquid off an article by pulsating compressed air jets on the article. The Examiner contends that because of EP '711, it would be obvious to employ pulsating air jets in Moysan or Welty.

Neither Moysan nor Welty suggest the step of employing pulsating air jets to clean an electroplated article. Moysan and Welty do not disclose any step of cleaning or drying an electroplated surface, or any other surface of the article. In column 4, lines 18-37 of Moysan, it is disclosed that a layer 22 can be deposited by physical vapor deposition on layer 20. In column 4, lines 9-25 of Welty, it is also disclosed that a layer 22 can be deposited by physical vapor deposition. Nothing in either reference discloses or suggests employing pulses of air to dry and clean an electroplated article surface. These references only disclose applying the layer 22 by physical vapor deposition, and these references do not disclose or suggest cleaning or subjecting the layer 20 with pulses of air prior to the application of layer 22. There is no suggestion to employ pulses of air in either Moysan or Welty. Applicant's claims are not obvious, and Applicant respectfully requests that the rejection be withdrawn.

Additionally, Applicant's claims provide many additional benefits over the prior art, and therefore Applicant's claims are not obvious. As disclosed in Applicant's specification on pages 1 and 2, water spots caused by the electroplating process can show through the thin vapor deposited layer. Previously, the electroplated article has been cleaned with a water based cleaning system, and nitrogen drying has been employed to dry the article. This method is expensive and is not always successful. Alternately, the article is hand dried and cleaned, which is laborious and time consuming. Applicant's claims including the step of subjecting the electroplated article surface with pulses of air to dry and clean the electroplated surface

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eliminates the problems of the prior art and solves the problems of the prior art. Applicant's claims are not obvious, and Applicant respectfully requests that the rejection be withdrawn.

Claims 10-20 stand rejected under 35 U.S.C. §103(a) as being obvious over Welty '478 in view of EP '711 and further in view of Pudem (U.S. Patent No. 5,558,759). Pudem discloses a finishing process for a base metal substrate including the steps of striking a component with copper to form a copper plate, electroplating the component with nickel, electroplating the component with brass, and then dipping the component in a chromate bath. The Examiner contends that it would be obvious to electroplate copper on a portion of the article, and therefore Applicant's claims are obvious.

Neither Welty nor EP '711 suggests the step of providing a copper layer. Again, as stated above, the combination of Welty and EP '711 does not suggest employing pulsating air jets to clean an electroplated article. Therefore, the combination of Welty, EP '711 and Pudem does not suggest Applicant's claims. Applicant's claims are not obvious, and Applicant respectfully requests that the rejection be withdrawn.

Thus, claims 1, 2, 4, 5, 7-24, 26-36 and 65-67 are in condition for allowance. No additional fees are seen to be required. If any additional fees are due, however, the Commissioner is authorized to charge Deposit Account No. 50-1482, in the name of Carlson, Gaskey & Olds, P.C., for any additional fees or credit the account for any overpayment. Therefore, favorable reconsideration and allowance of this application is respectfully requested.

Respectfully Submitted,

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Dated: August 4, 2003

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